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ABSTRACT

This is a summary report of a study that examined the practice and effects of vocational education in 14 classrooms in 8 Minnesota public schools. Data were collected from classroom observations; interviews with students, teachers, administrators, and counselors; and written survey instruments assessing student career development, vocational maturity, and demographic characteristics. Vocational education was found to play an important role in helping students build competence, apply basic skills, think through problems, learn technical skills, explore life roles, learn to work together, express themselves, extend themselves to the community, and practice life roles. Within the context of secondary education, vocational education was found to provide a change of pace from other experiences in the comprehensive high school. However, although the benefits of vocational education are clear, vocational students were frequently confronted with mixed perceptions by other students and by teachers about the value of their vocational education. Vocational education was found to help students in five ways. It helped students experience an egalitarian atmosphere and cooperation and teamwork, provided learning activities relevant to students' lives, gave teachers an opportunity to know their students well, and helped students develop self-esteem. It was concluded that those responsible for planning, administering, and teaching vocational education should continue to be creative and challenge students beyond their expectations, clarify the purpose of vocational education, and continue to provide new areas for student exploration without becoming so specialized as to narrow students' opportunities. (MN)

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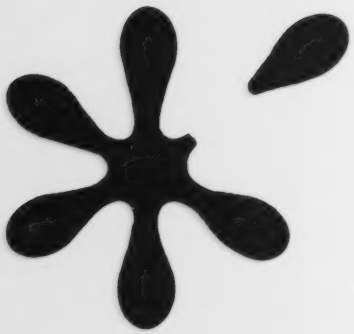

Purposes of vocational education in secondary schools

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Introduction

The **purpose** of this report is to describe the purposes of vocational education in secondary schools in Minnesota as they are now. Impetus for the study stems both from the inadequacy of earlier research in telling the whole story about the effects of secondary vocational education in Minnesota, and from the lack of attention given to vocational education in reports on the nation's secondary schools.

This study was designed to take a fresh look at the practice and effects of vocational education in secondary schools, the **goal** being to produce a comprehensive picture, in both breadth and depth, of the impact of secondary vocational education. The **method** selected was that of naturalistic inquiry — detailed observation of classrooms, and interviews with students, teachers, administrators, and counselors in secondary schools. Paper-and-pencil instruments were also administered to all students in the classrooms observed, in order to assess career development and vocational maturity, and to gather demographic information on the students.

A sample of 14 classrooms was selected in 8 Minnesota public schools, on the basis of the following criteria: (1) recognition as a quality program by leaders in vocational education; (2) representation of several vocational education areas — agriculture, business, home economics, industrial, and marketing education; (3) representation among urban, suburban, and rural locations; and (4) willingness to cooperate in the study. Data were collected during a three-month period in 1984.

Major themes were identified, described, and interpreted. The remainder of this publication is a presentation of themes, or purposes, manifest in the practice of vocational education in the secondary school. It is divided into sections: the purposes of vocational education, purposes in the context of the secondary school, and a summary with implications of the findings.

Purposes of Vocational Education

The purposes of vocational education are those ends to be attained by students. These are: building competence, applying the basics of knowledge to and from vocational education, thinking through problems, learning technical skills, exploring life roles, learning to work together, expressing self, extending self to community, and going on stage with life roles.

Building Competence. The development of competence pervades vocational education. The three types of competence are (1) skill competence, the realization that "I can do it"; (2) personal competence, the sense that "I feel good about myself"; and (3) contextual competence, the insight that "I know how and where I can fit in the world."

Students who were asked the purpose of their vocational education often described the benefits of skill competence. Building on their interpersonal and technical skills, students develop feelings of competence by taking on responsibility and achieving.

"At first I thought no way am I ever going to run that [press] and I kind of put it as a goal to myself to learn how to run this thing and to run something off myself. And when I did it, I was really happy with myself. The first time I ran something off I just thought, Wow!"

(Student in production printing class)

A sense of personal competence results in self-esteem. Personal competence is often an intended part of the secondary vocational education curriculum. Although students do not readily perceive this intention, they are able to articulate the positive changes within themselves.

Contextual competence indicates students' ability to interact effectively with their environment. Students accomplish this by being aware of who they are, feeling a part of a group, knowing where they are going in life, and having a scheme for organizing their environment. Students with contextual competence become less fearful of facing the future and feel better prepared to assume adult roles in families and workplaces.

Applying the Basics to and from. Application, the bridge from students' knowing to students' doing, is an integral part of vocational education. It also involves using knowledge learned in one course to what is being learned in other courses. For example, students frequently apply the "basics" of mathematics, science, and communication in their vocational education courses. And, conversely, they use basic concepts gained in vocational classes to understand mathematics, science, and communication.

"There needs to be a way for young people to try out some of those theories, make some mistakes and do it in an educational setting with people that know and care and can help, so that they'll have both things in their back pocket — a knowledge and a skill that they can apply."

(Administrator)

Students and educators think about application differently. Students are typically more concrete in their thinking about the application of skills, perceiving it as the use of specific skills in the short term. Educators, on the other hand, emphasize the importance of abstract theory or principle, and of the long-range value of higher order thinking.

Students become involved in the application process in several ways. First, their interest is piqued by various vocational youth organizations, such as Future Farmers of America and Distributive Education Clubs of America, as they apply classroom knowledge in competitive events. Second, personal interest is a common

motivator for students; for example, in auto mechanics classes they learn how to work on their own cars, and in agriculture classes they focus on problems on their own farms. Third, a desire to achieve or experience a feeling of competence motivates this application. Fourth, students are motivated to apply knowledge from one subject or course to another because career and job possibilities increase as their competencies increase. Fifth, one of the easiest ways to involve students in learning activities is for them to enjoy the application.

"What is unique is that in every class that I teach we try to teach the theory in the lecture, and in the classroom we try to teach the practice and then develop the skill, if there is a skill involved. So when we are learning to judge beef cattle, we learn about it, we read about it, and then we practice on slides, and then we try to go out there and do it for real."

(Agriculture teacher)

Thinking Through Problems. Vocational education has a unique orientation within secondary schools. Its focus is practical, with consideration for action to improve real problem situations. This special problem-focused environment provides unique content, customized experiences, specialized questioning, and dynamic student-environment interchange.

The problems arise in the natural setting of workplace and family simulations, as well as from teacher-directed assignments and hypothetical situations, students' part-time jobs or small business operations, students' lives as consumers and family members, and students' vocational club projects. The nature of vocational programs, and their content and structure, merge the students' school and nonschool lives to a greater extent than may be true of other secondary school programs, thus surfacing problems for discussion.

Most of the problems are technical in nature and involve how to do particular tasks. However, other problems include interpersonal considerations and the weighing of values, interests, and needs. Students report that the interdependent nature of their vocational classes makes them much more aware of their own responsibility to their classroom group and concerned about others' functioning and well-being. In these situations, interdependence is encouraged rather than independence and competitiveness.

"I like to take a secondary role and let them pass or fail on their own. Let them see by trying something if it works out, how it works out. Is it satisfactory for their kind of thing? Let them make the choices."

(Teacher)

Problem definition and resolution in the secondary vocational education setting involves developing decisionmaking, reasoning, planning, and problem-solving skills, as well as learning to anticipate and consider consequences. Defining the nature of the problems and deciding whether to focus time and energy on them are not incidental elements of the problem-solving process.

Books are important but not the primary source of knowledge; rather, students are asked to rely on their own and others' experiences for solutions to problems. Teachers often encourage students to explore their own courses of action and to consider alternative strategies for tackling a problem. Most teachers regard the movement of their students toward self-sufficiency and responsibility as the goal of the problem-oriented process.

Learning Technical Skills. Technical learning involves learning concepts and, through practice, becoming adept in their use. Teachers evaluate this use by students' demonstrations of skills and accomplishments of tasks, or application of technical learning toward the completion of a project. Often this takes place in simulated work, family, and consumer situations.

Students describe the development of technical skills as one of the most valuable things they learn in class. Some demonstrate an understanding of the relationship between technical learning and their future (for example, knowing how to look for a job and how to be a wise consumer).

"It's not like taking a lot of notes and then taking a test on it. It's more like learning about it and doing it, and then remembering what you've done."

(Student)

Often the transition from school to work is facilitated by supervised work experiences. These situations involve technical skill development in the classroom during one school year and combined classroom and work experience during the following year.

In addition, skill development includes those skills needed for everyday living. Teachers in all areas are aware of the value of the skills they teach in helping students to make their way in society. These skills include obtaining credit, furnishing an apartment, planning a budget, using a keyboard, and maintaining a car.

Exploring Life Roles. One of the purposes of vocational education is to allow students to explore life roles, in order that they may make informed family life and career decisions.

"But it is still learning about yourself, and when you learn about yourself you will decide what you want to do, how far you want to go with it, and then you've got your tools you carry along with you."

(Teacher)

Exploratory activities are designed for students with an interest in a particular field, those who are considering career choices, those who want to develop a better understanding of family dynamics, and those who wish to develop an awareness of the economy and various kinds of training and types of employment.

"I'm going to school and I think that after school my boyfriend and I might get married and so I think this is helping me to look and see. Is he the one I want? Are we going to be able to live together? Is this the right kind of love that we can build a marriage on? That's what I think I'm getting out of it."

(Student in home economics class)

Exploration takes place in two phases. The *searching* phase of exploration involves students' finding out who they are, what they can do, and what opportunities are available. It also means learning to define one's life roles in relation to skills, interests, and values.

During *scrutiny*, the time when students ask, "Do I like this?" and "Is it for me?" students put their learning into a career and life-role context. As they learn about a role, they come to appreciate the skills it requires and the responsibilities it entails.

Learning to Work Together. Although learning to work with others is not typically a stated purpose of vocational education, many students perceive it as an integral part of the vocational education classroom experience and as a learning outcome.

Students value learning to work with others for several reasons. First, students are faced with conflicts and tensions in working together, and they need to work our disagreements and correct problems. Second, students must meet project deadlines and learn to cooperate to do so. Third, students are placed in situa-

tions in which they have to interact with others with differing skills and abilities. Fourth, students' opportunities both to supervise and teach others and to learn from others promote their learning to lead and follow.

"You just have to have a lot of communication going on, teamwork, mostly teamwork. It's like basketball players, when they're on the court they need communication and teamwork and that's what we need in there."

(Student in food service class)

In addition to learning the value of cooperating as a team member in a work setting, students realize that these skills are critical in forming life partnerships and other interpersonal relationships.

Expressing Self. In vocational classes, aesthetic pleasures are evident in students' expression of emotion; their participation, achievement, and pride; their creativity; and their development as critics of the quality of work.

The expression of emotion provides a human quality to the most technical of subject areas. The family-like comfort students find in their classes is reflected in their humorous interchanges, as well as their expressions of anger, frustration, tears, and affection.

Students often express their opinions in class discussion. This involvement results in pride that motivates further achievement in developing and polishing skills and talents. Indeed, adults involved in secondary vocational education believe that unlimited achievements are possible through vocational education. Several counselors mentioned that this outcome was a fundamental purpose of vocational education options.

Creative production resulted from the development of technical and social expertise. As examples, students turn technical knowledge into computer programs; unfold marketing talents in busi-

ness courses; design artistically-presented foods; and develop unique solutions to consumer and family problems.

By learning to appreciate quality and to judge lack of quality, students adopt an equally important role as critical thinkers, learning to understand standards and qualities associated with products, services, and human interactions.

"There is more open discussion. Sometimes we really get into it and you express your views. Some people are different. They have their views and sometimes they get mad. It's different than any other class I've taken."

(Student)

Through these various means of expressing themselves, students gain knowledge about themselves and others, develop their unique talents and future careers, become conscious critics, and learn to appreciate and enhance a quality world.

Extending Self to the Community. Vocational education extends itself to the community in different ways. First, people involved with vocational education actively strive to meet community needs. Although it is commonly believed that business and industry are served by vocational education, charitable and social groups benefit as well.

Second, vocational education contributes directly and frequently to school well-being by the services it provides to schools — for example, printing, typing, food service, and repair.

"A lot of times after teachers have been served, they'll tell you how they really enjoyed it. They ask how it's put together and how we like doing it."

(Student in food service class)

Provision of goods and services for others is rewarding, not only because students gain technical and social expertise, but because of the satisfaction and enjoyment students gain, resulting in an increase in confidence. Further, students receive appreciation from others for their services—from "thank you's" and compliments to extravagant appreciation presentations. In addition, students learn to think critically about their service, its place in the community, and their role and comfort from it.

Going on Stage with Life Roles. "Going on stage" is the public presentation of students' ideas and skills learned in vocational education. This public presentation takes the form of producing a printing job, preparing and serving food, typing letters to send to companies, or repairing an automobile.

> **"I've got seniors out here who say,'Yeah, my grandpa has a farm, and I'm going to take over and farm it.' I say, 'Okay. Let's have the PCA (Production Credit Association) guy come down here and get close to your records. What do you think it will take for next year? We will have you put together an application for the PCA.' And out of the 18 kids in that class, every single one of them was rejected."**
>
> *(Agriculture teacher)*

Going on stage involves several phases. First, it means anticipating one's performance before the audience, including determining the roles to be filled, by whom and for how long, and whether changes in roles will need to be made.

Second, students must prepare for the performance, both by having taken the previous courses to learn fundamental understandings and skills, and by being knowledgeable of and attentive to the roles and work of others.

Third, the public presentation itself is like "the real thing." Implicit in this perception are expectations and beliefs about

the characteristics of the workplace, including the home environment.

Students do not experience an ideal "stage" or work setting. They learn to accept experiences that bring disappointment, cause frustration, and create conflict. Not only do they learn what is most appealing to the public, but also they learn to decide how much to cater to these popular requests, and that one's own preferences may not be crowd pleasers.

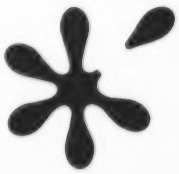
"We served hot dish today and it didn't go very well. Never does. Think it's because people eat a lot of hot dish at home. But I won't not put it on the menu because of that because I want the kids to see that."

(Food service teacher)

Students learn to handle interpersonal conflicts and to sense the consequences of life-after-school problems and situations. They learn to present repeat performances, doing the same tasks over and over again. And they learn that the show must go on at the scheduled time, regardless of how they feel or who is absent.

Students also experience the rewards of a job well done. Whether they be public recognition, peer approval and praise, personal satisfaction, or financial payoffs (simulated or real), these rewards are meaningful to students and give them a sense of "the real thing."

Purposes in Context



Several purposes of vocational education relate to its context in the secondary school: the pace in school, the appropriateness of educational offerings, the meaning of school, and the fairness of schooling practices.

Changing the Pace at School. Vocational education classes provide a change of pace from other experiences in the comprehensive high school. According to students and educators, the classes have a different structure, provide different learning experiences, provide a link to the outside world, and are more future-oriented than other courses.

One of the major differences in the structure of vocational education classes from other secondary school classes is students' opportunity to move throughout the classroom as they work on projects. Students feel that the structure meets their need for freedom of choice and self-direction of learning, as well as the development of responsibility.

"You get more involved in it than other classes. Other class work you don't get into as much."

(Student in home economics class)

Students' freedom to express ideas and feelings makes learning easier and more fun in vocational education classes. Learning is also different because teachers approach courses and students differently. Teachers often develop simulated jobs, allow students to work on their own or in groups, and engage students in solving problems. Consequently, students learn the subject matter in ways different from those in many other secondary school classes.

Vocational education classes also differ from others in the numerous course-related activities that take place outside of the class-

room. These activities include selling products in the school or community, participating in student organizations and their competitions, and attending social events related to class. Job placement in the community also provides a direct link from the class to the working community; other vocational education classes provide work experience as part of the classroom experience.

Providing an Appropriate Education? Secondary vocational education is sometimes thought to be a less valued education. The fact that non-college-bound students predominate in these courses reflects perceptions of what is required to get into or do well in college. Given the perceived correlation between their college plans and students' academic ability, vocational education has become an "appropriate" place for students of lower academic ability in the minds of some educators.

"I don't think they are all of the same kind. In ag I see probably a minority of very good students — they are very responsible, very concerned, and interested people who will be good farmers, good businessmen. I see others who have not been good students in other subjects and they are probably not extremly good students in ag courses either but who enjoy it and they're getting something from it. I know in our school I think we have a teacher who is able to take a student who is pretty nonacademic and still get quite a bit of participation from that student."

(Principal)

Some vocational education students intend to go to college, hoping to secure a job with their technical skills in order to pay expenses. Some students want to develop skills and understandings they can use in building meaningful family lives. Still other students in vocational courses are exploring their interests in a tryout period, to determine where they "fit" in the world of work.

Even though a wide variety of students might be expected in vocational education courses, students in these classes are confronted with mixed perceptions by other students and by teachers about the value of their vocational education.

Vocational education is a means by which a secondary school can be comprehensive, serving the needs and interests of all students in a prescribed geographic area.

Giving Meaning to School. The connection between any aspect of a vocational class and a student's immediate life gives meaning to school. Some concerns that give meaning to school are as concrete as fixing the brakes on one's car. Others are less tangible, such as learning about sibling rivalry.

"In Spanish, we had to identify the parts of the car and I knew them. In chemistry, you have certain mixtures — gas, fuel and air mixtures, carbon monoxides. Things like that I knew. That's how I passed some of the tests. If you can hook something up with a car, then I am fine!"

(Student)

Students meet practical needs by working on personal and group projects in vocational classes, in addition to polishing skills that are transferred into practical solutions outside of school. Students often intend to use these skills to improve their family situations. They also perceive relevant links between their present vocational knowledge and future lives as consumers, family members, and workers.

Some teachers explicitly plan lessons so that activities are relevant to student concerns. They relate questions to student interests, apply class information to related situations outside of class, design coursework around perceived student needs, and suggest possible future applications.

Counselors, principals, directors, and teachers believe that when students are interested in a topic and find it meaningful to them, their motivation increases and their education broadens. Students become further interested in learning abstract skills that are needed to solve immediately intriguing problems.

"If you can motivate that kid somewhere along the line, and find something he's interested in, then maybe he's going to become a better student all over. And maybe that helps him stick with it and stay in the program."

(Teacher)

Considering Fairness in School. The concept of equity refers to justice and fairness. It means that students who are alike in educationally relevant ways should be treated equally. Students who are different in educationally relevant ways should be treated unequally. In order to realize the benefits of an educational program, some students might need *unequal* treatment — extra attention in order to learn a concept or task, for example. Equity was considered with respect to access to vocational education, treatment in vocational education classrooms, and outcomes of vocational education.

The apparent free choice for students to select vocational education is, in fact, steered by powerful forces. Several national trends affect access to vocational education. Current reports on the quality of education are a major influence on vocational education enrollments. The cries for increased "academic" standards and requirements discourage enrollment in vocational courses and change the allocation of resources.

While vocational education serves primarily non-college-bound students, these students are of several sorts. The largest group is comprised of middle- or low-academic ability students who are thought to be more capable of learning with their hands rather

than their minds. Another category of students served by vocational education is those who are not especially motivated to achieve in school. A third group is those who have identified special interests in vocational areas, for either vocational or avocational reasons. A fourth group is comprised of students who have special needs — students whose handicaps and economic and academic disadvantages create special demands on learning environments. Students in the fifth group are those who follow traditional gender-role definitions in enrolling in classes and selecting careers.

"When higher education puts limits and requirements on college entrance, students deliberately eliminate vocational background, and this is a limitation. Students who are going on to college are being told, and they believe this, that they have to take a foreign language. Bull."

(Teacher)

Concern about student treatment in vocational classes centers on how students gain access to knowledge in the classrooms and on the quality of interactions in the classrooms. The teachers observed varied their behaviors, instructional methods, and evaluation of students according to each student's educational needs and interests, not according to his or her ethnicity, race, or handicaps. In fact, vocational classrooms help students to benefit from their educational experience in five ways.

First, students find a niche in vocational education, experiencing an egalitarian atmosphere, in which teachers rarely lecture but more often coach, facilitate, "trouble-shoot," and work alongside students. Second, students experience cooperation and teamwork, recognizing that the success of their group depends on everyone doing his or her part, whether it be a food service class serving 80 meals at lunchtime or a graphics class producing thousands of graduation announcements.

Third, vocational classes enrich student's educational experience by offering learning activities that students perceive as useful

and relevant in their lives. Without vocational education, some students would lose interest in school, perhaps dropping out. Fourth, the structure and atmosphere of vocational classes allow teachers to get to know their students well. Teachers circulate throughout the classroom and work with students one-to-one. Fifth, vocational classes also help students develop self-esteem. Numerous projects and activities with immediate feedback increase students' competence and boost their confidence. Teachers encourage students to accept new challenges to discover and build competencies that they did not know they were capable of. When others perceive students as competent, and recognize and praise their efforts as teachers do, students develop a sense of status.

"It is giving me the experience that I'm going to need. I love it. I wish I wasn't a senior. I'd take it again. The college I'm going to has it there. So I'll probably take it there, too."

(Student)

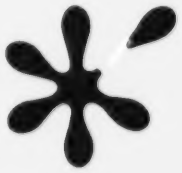
To what extent does vocational education in the secondary school enhance the quality of students' lives in the long run? Most students elect vocational education courses because of an immediate interest in learning specific content, and most students believe the course they are taking will help them in whatever they will be doing one year after high school. Teachers, counselors, and administrators believe vocational education helps students to explore options, prepare for further education, and develop job-specific skills. They also believe these courses serve students in the long-term by laying a foundation for other learning and experiences and by developing students' self-esteem.

"For a comprehensive high school or junior high, you need a broad range of experiences that will fit the needs of a lot of different kids. Somewhere in that school the kid needs to find a place to have success."

(Educator)

Summary and Implications

The findings reported here raise questions about and have implications for both the practice of vocational education and policies that determine its role and purposes in public secondary schools.



Many Purposes. Vocational education has many purposes. In addition to the development of technical skills, many purposes have a humanistic dimension to them. The change of pace in school, development of competence, experience with public presentation, relevance of material and skills learned, opportunity to explore, and equity in the classroom, all contribute to many dimensions of students' development.

These purposes help to prepare the student for a role in society and to become a responsible member of society. With these purposes, vocational education contributes significantly to the general education of students, and, therefore, should be viewed as an integral part of the comprehensive high school.

> **"The more things that you can do, the better you feel about yourself — the ability to fix something, to understand something because you've taken it apart. That positive self-image spills into every other thing you do. You may become a medical doctor, but that self-confidence helps you in school, in interpersonal relationships."**
>
> *(Industrial arts teacher)*

Some agreement and common understanding of the purposes of vocational education would be useful in order to facilitate policy development, curriculum development, and program implementation. This common understanding would also aid in understand-

ing how vocational education fits into the overall purpose of secondary education, as well as how it links to other curricular areas.

Implicit Purposes. At the onset of this study, the authors anticipated finding evidence of exploration and preparation for work or further education as the major purposes of vocational education. What they did not expect to find were the numerous other purposes occurring in the classroom. Several of these purposes, such as the application of basic knowledge to and from vocational education, the development of competence, strengthening of working relationships, and providing for expression, would not be evident to the casual observer or spelled out explicitly in a course outline. And yet, once they were identified, they were observed repeatedly, often in subtle ways.

"Andy [a vocational teacher] sent [some of] his [students] to a toastmasters group. You should see some of these timid little souls who are taking the course . . . all of a sudden they're up and banging newspapers on desks and giving speeches. They're feeling good and walking tall."

(Vocational education director)

In fact, these implicit purposes provide some of the glue connecting all vocational education courses. The development of competence, for example, might be more pervasive than the more obvious purposes attributed to vocational education.

The authors suspect that these more implicit purposes are evident in other areas of the secondary school curriculum and are not unique to vocational education. However, this study indicates that vocational education encompasses a rich array of purposes not typically associated with it.

Interacting and Overlapping Purposes. The authors attempted to identify purposes that are "pure" and do not overlap with other purposes, and tried to report data in this manner. However,

the purposes may more realistically cluster or form chain or network effects.

Because these purposes do not provide clear-cut prescriptions for policy or curriculum development, and are difficult to conceptualize and measure, the authors expect that both frustration and the possibility of new visions for vocational education will result. This study was exploratory. Further research could conceptualize several major purposes that would subsume other themes that were identified. Each purpose might then be developed, with indicators identified to make the findings more useful in providing direction for vocational education.

"Vocational education is an integral component or overall attempt to meet the needs of all the kids of all the people. Public education's task is to educate all of the children of all of the people. And, therefore, we offer a variety of educational opportunities for students."

(Assistant superintendent)

Missed Opportunities to Discuss Ethics and Aesthetics. Explicit discussions about the ethics and aesthetics of work and what students were learning were infrequent in vocational classrooms, in light of the many opportunities teachers had to pursue those discussions.

From the authors' perspectives, aesthetically enjoyable experiences in vocational courses can contribute significantly to students' lives as active citizens, producers, and critics. Considerable potential exists for helping them develop skills in verbal, technical, social, and creative expression. Aesthetic discussion could have occurred numerous times in classes but did not — for example, when a printing job was completed with precision and expertise, and the final product was truly a work of art, or around the aesthetic qualities of a satisfying personal relationship.

The equitable treatment of students in class becomes an ethical concern. Generally, students were treated in a fair and just manner; students who were special in some way were given opportunities to excel despite limitations; appropriate behavior was modeled by adults and generally followed by students; and problems of individual students were handled in subtle and sensitive ways. Still, teachers did not take advantage of numerous opportunities observed for addressing equity or other ethical concerns in class.

"It (the class) relates to what you will do in the future and how to cope with your decision — not a homework class but opinion and thinking, which is harder when you apply it to your own life and what it will be like."

(Student)

In spite of the void of class discussion on these topics, vocational educators and policy makers must ask: To what extent should vocational education encourage students to examine the ethics of their work? Should aesthetic and ethical issues become an explicit part of the classroom curriculum? Is it sufficient for teachers to model behavior and allow students to experience the aesthetic value of products and services?

Different Perceptions of Students and Educators. Students and adults expressed different purposes of vocational education. Students' responses were more likely to refer to short-term benefits, such as learning welding, whereas adults responded that students would learn a skill of long-term benefit. Further research should examine the existence of the relationships posited among students' development of skills, their positive self-image, and their resulting sense of satisfaction with their life roles.

Another difference between student and adult responses involved predictions of the students' destinies. While 70 percent of the students expected to continue in education, teachers predicted that the percentage of students who would continue their studies would be considerably lower. A need exists for student-educator dialogue about students' skills, abilities, and aspirations.

Further, to what degree can teachers successfully develop relevance in their courses and still challenge students to go beyond the present and learn new information? In what situations does relevance create and expand students' understanding and in what situations does immediate relevance constrict students?

"In almost any kind of occupational endeavor there's need for some types of skills that you acquire that are manipulative of either tools and materials or with people, and those are the things that vocational education deals with."

(Vocational education director)

Status of Vocational Education, and Is It for Everyone? Why is vocational education sometimes seen as holding lower status than other school programs? The recent trend of returning to the basics has been publicly visible. Does the public value the purposes of vocational education in the curriculum? Should vocational education strive to dispel some of the beliefs about its purposes being less central to the role of the secondary school? Who will listen and who has power to change these beliefs?

What would happen if vocational education disappeared from the public secondary school curriculum? What would happen to the students who would drop out or tune out of high school

"Many people think there's a higher status of being a thinker and a planner than being a doer. And yet that's the majority of our society — the doers. We have to come to grips with the fact that people do things in the world for a livelihood and that's what your vocational programs are about — teaching people how to do things with the knowledge they've gained."

(Teacher)

because of their difficulty in relating to the remaining curriculum? What are the long-term consequences for students and for society if these students are already disadvantaged economically, educationally, or socially?

We are still left with the question of who should be served by vocational education in the secondary school, and how vocational education can serve the interests of all students in the school without short-changing students who are least likely to continue their formal education. Perhaps vocational education will not be seen as acceptable for everyone until society recognizes the value and worth of all types of work and the importance of developing family strengths.

"Really did something today — ought to be put on the calendar."

(Student)

Positive Feelings about Vocational Education. Even though vocational education is seen by some as being of less worth than other secondary school courses, students generally feel good about their involvement in vocational courses. Some students believe that others do not understand what goes on in vocational education.

The authors of this report appreciate the richness of the educational experience that was observed, often proclaiming, "I would like my child to be in that class." This contradiction between the positive feelings of participants and observers and the negative perceptions of the quality of vocational education results in several questions needing further examination.

How have the purposes and accomplishments of vocational education become such a well-kept secret? Why is there such neglect and criticism of vocational education when it is clear that so much good results? How do students deal with this inconsistency

of their feelings about their education and their knowledge of others' perceptions? Are members of society and school leaders imposing a value system that is unfair or unjust to those enrolled in vocational classes? Who should answer these questions?

Several recommendations that came from participants in the study may counteract a mixed image of vocational education as an integral and necessary part of the secondary school: vocational teachers should interact more with teachers in academic subjects, thereby reinforcing learning from one class to another; administrators should be clear about the purposes of vocational education in the secondary school; more information should flow from students in vocational education classes to those not enrolled; administrators and other evaluators of vocational learning should be helped to understand the complexities of observing the purposes of vocational education in the classroom; teachers of vocational education should continue to be creative and demanding of students, challenging them beyond their expectations; vocational education should continue to provide exploration but not become so specialized that it provides narrow opportunities; and a wide and diverse group of students should be attracted.

"Many of those kids go far beyond their expectations of what they're able to do. So a good program will challenge kids, will lead them to new achievements they haven't done, and will increase their self concept."

(Superintendent)

Related Publications

An Untold Story is a condensed version of a complete project report by the same authors, entitled **Purposes of Vocational Education in Secondary Schools of Minnesota — Some Insights from Current Practice.** This full report will be available in early 1986 from the Minnesota Research and Development Center for Vocational Education, Department of Vocational and Technical Education, University of Minnesota, 1954 Buford Avenue, Saint Paul, Minnesota 55108.

The theme of experiencing equity in vocational classrooms has been developed more fully in a monograph, **The Practice of Equity: Access to, Treatment in, and Outcomes of Vocational Education in the Secondary School,** by Jane Plihal, Linda Ernst, and Marsha Rehm. Copies of this report are available from the Minnesota Research and Development Center for Vocational Education.

A companion piece to this publication, resulting from a study group review of the historical, contemporary, and future perspectives related to the purposes of vocational education in the secondary school, is entitled **Purpose of Vocational Education in the Secondary School.** This report, by George Copa, Jeanette Daines, Linda Ernst, Jim Knight, Gary Leske, John Persico, Jane Plihal, and Steve Scholl, is available from the Minnesota Research and Development Center for Vocational Education.

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